

On route to big(geo)data: a socio-technical trajectory of GIS and the questions it poses

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Abstract:

In the presentation I explore the interplay between changing notions in the governance of information technologies and the nature of geographic information systems (GIS) over the past 20 years. Propelled by internet development, the proliferation of mobile phone technology and use, and the densification of sensor networks, especially in urban areas, we recently witness a diversification in data producers, sources, and types. GIS implementation now becomes interwoven in these newer and more complex flows of digital data. Technical and organizational design with long-term goals in mind are paralleled and sometimes replaced by more incremental, sometimes ad-hoc and experimental forms of GIS implementation and corresponding geographic information (GI) types and uses.

Placing the dialogue between governance and GIS development along a historical axis serves as basis to reflect on recent changes in types, collection and uses of digital GI in the era of big data analytics; and as a basis to formulate interdisciplinary questions for current research and policy in the governance of and through GI.

For illustration and substantiation I draw on insights from research conducted between 2008 and 2014 in Indian cities on GI use in the domains of land administration and water provision; on research between 2015 and 2016 on citizen generated digital data in the context of smart city development in Amsterdam, as well as on insights from international conferences and workshops on big data and smart technologies between 2014 to 2016.